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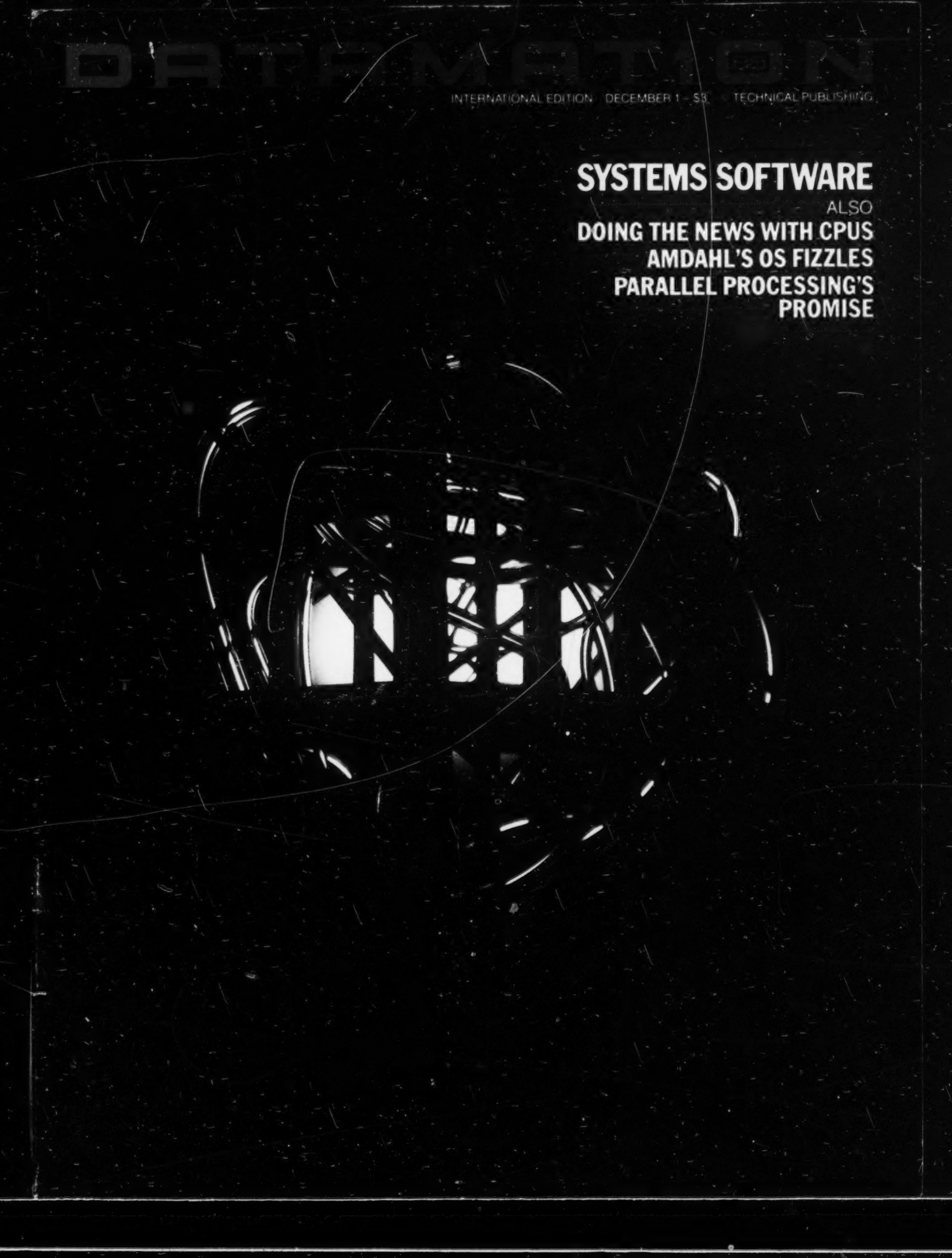

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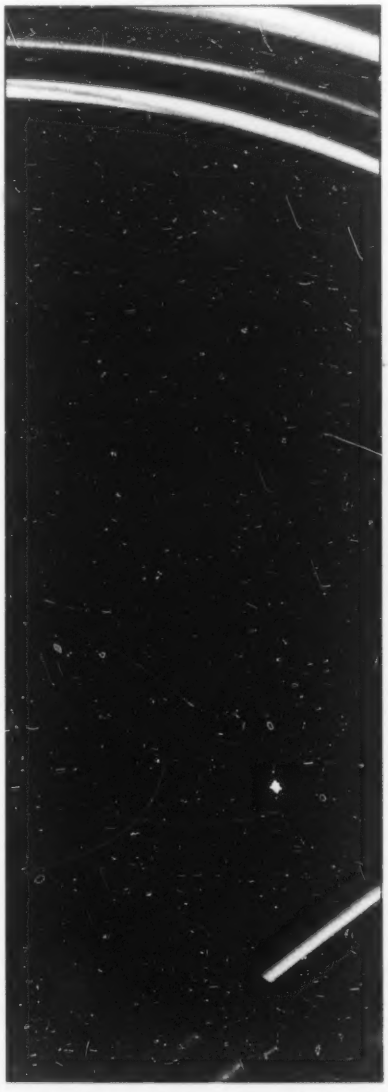

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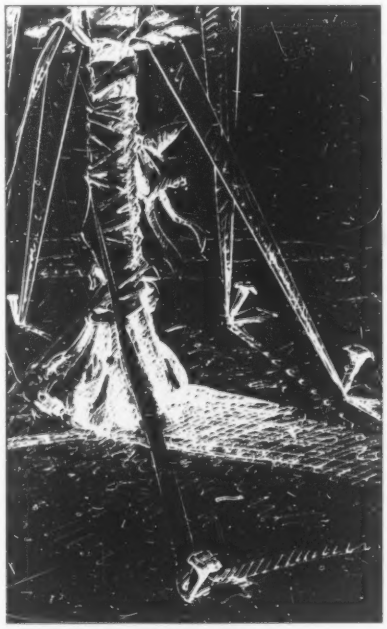

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COVER PHOTOGRAPH BY TOGASHI

INTERNATIONAL

Continental companies are offering bountiful bonuses and benefits to attract the right recruits.

DP PROS: WHAT ARE THEY WORTH?

ILLUSTRATION BY DAN ADEL

First, the good news. Skilled data processing professionals are very much in demand in Europe, especially if they have networking, database, or on-line systems experience. There are more job openings than ever for these pros at Continental corporations that put a high value on high tech. So high that they are willing to offer bountiful bonuses and benefits to attract the right recruits.

Now, the bad news. The party's over for European dp personnel who are used to pulling in fat salary increases each year. Those massive raises have become a thing of the past. "The industry simply isn't willing to pay outrageous salaries for dp people any longer," says Franz Czap, dp chief at West Berlin electrical firm Osram.

Smaller salary increases in the dp sector are evident in almost every European country. In West Germany, top dp managers saw their wages remain almost static in 1985, according to reports from the staff recruiting division of market researcher Kienbaum in Gummersbach. Kienbaum found that while the senior dpers in 318 companies earned only 1% hikes, other more junior dp managers received an average salary boost of 3.3%.

In France, Sema Sélection, a recruiting consultancy in Paris, surveyed 220 organizations only to find that dp salaries had risen a scant 2.9% in real terms during 1984. Across the Channel in London, Computer Economics talked to over 400 companies to discover that dp wages in the U.K. were up 7.6%. That's a paltry increase compared with 1980, when the average British dper was hauling in enormous 27% raises.

So what has changed? Well, the role of data processing, for one thing. The dp function has become more integrated into the overall structure of European organizations. And as a result, the skyrocketing salaries of data processing pros have been brought down to earth and brought in line

In France, the demand for programmers, systems analysts, and data entry people is down.

with other corporate positions.

"Data processing staff are now paying for the inflated merit raises in the past," says Peter Stevens of Computer Economics. "These increases took them to the top of their companies' salary grade structures and now there is nowhere else for them to go."

Osram's Czap agrees. "These natural limits have stopped the vicious spiral of rising dp salaries." That spiral was winding right to the top. "Due to the expansion of the dp role in the company," observes Erhard Schmidt, a project supervisor with Kienbaum, "the director of MIS or dp has established a position right below the top management."

Caroline Bagley, managing consultant in the major accounts division of the international recruiting company Computer People, in London, believes that companies that have more hands-on experience with computers are getting more pragmatic when it comes to paying dp personnel. "Dp is now very much a part of the corporate structure," she explains. "Some of the mystique of dp is disappearing. Financial directors are getting more involved than ever before in computing and they are taking a realistic approach to salary increases."

Bagley also sees evidence of belt-tightening. "The recession has had an effect on budgets," she says, "and companies are more restricted in the salaries they can offer. That makes finding new people a difficult task. So, to entice the best dp employees, firms are offering a host of other benefits.

"There are lots of executive perks—like stock options schemes, expensive cars, large expense accounts, and bonuses—to be had, particularly for senior dp staff." Sometimes those bonuses can be substantial. The Lambeth area council in London, for instance, offered new workers a bonus of up to $3,500 to join its dp team.

In Scandinavia, the focus is also on fringe benefits, but for different reasons. In Sweden, for example, people who earn more than $35,000 a year find their incomes eaten up by taxes. This taxing situation, according to Martin Edin of headhunter Marknadsrekrytering in Stockholm, makes perquisites a prerequisite for dp job seekers. The same holds true in Norway.

All these employment extras, however, aren't making it any easier for Continental companies to find the right dp personnel. There's an acute shortage in Europe of dp professionals who have the experience firms need. The U.K.'s National Computing Center estimates that the British dp industry needs roughly 20,000 more computer pros. In particular demand are programmers and systems analysts who have experience in real-time systems, communications, and database software.

FIG. 1

EUROPEAN DP SALARIES*

	FRANCE	W. GERMANY	U.K.
Dp Manager	43,000	44,000	35,500
Operations Manager	26,500	26,000	24,000
Chief Systems Analyst	25,500	25,000	24,500
Programmer	15,500	19,500	14,500
Senior Operator	15,000	17,000	16,500

*Average salaries in dollars as of spring 1985
Sources: Sema Sélection, France; Kienbaum, Germany; Computer Economics, Britain

W. GERMAN SHORTAGE ACUTE

The situation is even worse in West Germany, where 30,000 dp people are needed, according to the national job market and labor research institute in Nuremberg. And while there are dp workers available, many of them lack the practical background that companies are looking for. "We are happy if only two applicants meet our requirements when we're recruiting," Osram's Czap says resignedly.

The French are also having trouble getting experienced dpers. Jean-Paul Menassier, director of Sélé-Cégos Informatique, reports that there's been a 6% increase in the number of unfilled dp job slots between 1984 and 1985. "When you analyze this overall figure," he explains, "you find there has been a fall in the demand for programmers and systems analysts, as well as for data entry people. While the demand for operating staff is stable, the demand for systems engineers and project leaders has risen."

Bernard Beaunoir, a senior consultant with Sema Sélection, believes that "the main shortage is with technical support staff, systems engineers, and networking specialists. There's also a particular need for project leaders aged 28 to 30 who have a good five years' experience behind them."

Beaunoir sees dp staffs becoming smaller but better qualified. He also puts networking and database experts at the top of the list of dp desirables. Camille Cassin, a director of Dataid Sélection, adds info center specialists to that list.

While most user companies want trained people, they are unwilling to do any training themselves. "There are fewer than a third of the firms we survey that employ any trainees at all," declares George Penney, the NCC's careers project manager. Computer Economics' Stevens also comments of the training conundrum, "Companies embarking on new projects need experienced staff, of course. But existing installations could rely more on training."

The problem is that it costs up to $9,000 a year to knock a trainee into shape. Adding those costs up, companies are reluctant to take on raw recruits. "There are companies," says Stevens, "that employ 50 graduates and then find out 14 months later that 40 of them are gone."

The British government, determined to tackle the training question, has set up the Information Technology Skills Shortage Committee. Headed by junior industry minister John Butcher, the committee has asked the Confederation of British Industry (CBI) to suggest ways to solve the skills shortage problem. The CBI in turn has established the Information Technology Skills Agency, which is supposed to make sure that universities and colleges turn out graduates who are better qualified to enter the dp industry.

CBI will use its $58 million budget to produce more graduates with dp and engineering skills. The task force will also try to persuade industry to take over some of the training chores. "There is no doubt that there is reluctance on the part of some companies to train their people," notes Stewart Judd, deputy director of the CBI agency.

Judd also cautions companies about hiring graduates who are overqualified for a particular dp job. "If [companies] recruit highly qualified people for routine work, they are going to be in trouble," he warns. "You don't need highly skilled people to maintain [an installation]."

Further up the dp career ladder, skills become very important. But being technically competent is no longer enough, as Dataid's Cassin points out. "There are plenty of dp staff on the market, but there's a lot of waste because companies are very demanding," he says. "They want dp staffers who are not only technically able, but also have a great human potential. That's because there's a growing trend for dp staff to move into other managerial positions in their corporations. They're not only going

into production management, where dp skills are of particular value, but also into general management."

MORE THAN COMPUTER EXPERTISE

Menassier of Sélé-Cégos also agrees that companies want more than computer expertise. "Employers now ask for dp experience plus managerial or production experience," he says. "There are stil' traditional dp jobs, but there are many new ones too, especially in the field of networking." He predicts that "network engineers have a big future."

Scandinavian firms also want a new breed of dper on their payrolls. Norwegian headhunter Hans Petter Lauritzen in Oslo reports that companies in his neck of the woods "want their dp managers to be more people managers than before. The dp background is still important, but they also want people with an overview and a vision. The dp manager must be able to inspire and motivate people and to convince top management. So, generalists tend to get the best jobs."

Data processing people are demanding more from their jobs too. "Dp people are putting a lot more emphasis on the professional environment in their new jobs," says Lauritzen. "They don't want to lose touch with the forefront of dp development. They want to continue growing. Because of this, large companies tend to get hold of the best candidates. The smaller ones often lose out."

The dp community in France shares the sentiments of the Scandinavians when it comes to its job. "What interests dp staff in particular," explains Sélé-Cégos director Menassier, "is the quality of the project they are going to work on and the technical experience it will give them."

In France, as elsewhere, dpers are still relatively mobile, changing jobs more frequently than most other professionals. But that job-hopping seems to be slowing down. "There are even some programmers who stay in a job for more than a year now!" quips Menassier. Staying even longer seems to pay off. "Instead of moving on to new pastures, people are tending to stay put, because there is little incentive to move," according to Computer Economics' Stevens. Stevens' research shows that programmers who remained in the same job were rewarded with raises that averaged 12%, well above the overall average for U.K. dpers.

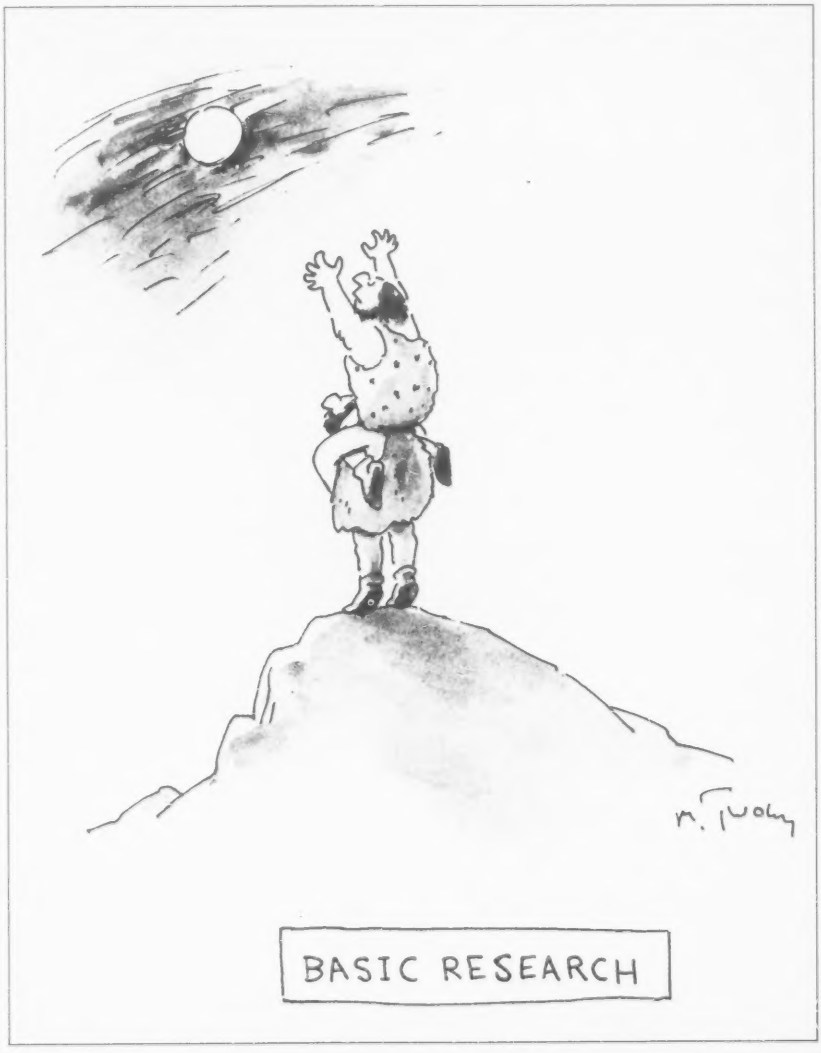
The payoffs can be even greater in a big company. Kienbaum's Schmidt says that a dp manager in a large West German organization may earn $49,000 for the same job that may go for $34,500 in a smaller firm. These salary discrepancies between the mighty and mini companies are repeated all over Europe. In France, for example, large companies pay up to 20% more than small ones for dp pros, while in Britain, the differential is two to one.

That leaves medium and small-sized Continental companies in dire straits when it comes to securing the services of skilled dp workers. Hoping to lure some seasoned staffers away from the larger firms, these companies may offer these coveted candidates more responsibility, more management status, and, alas, more money. The big boys will naturally fight back, making their perks more persuasive and their salaries more salubrious.

There are already indications that the salary scene is indeed brightening for European dpers. Computer Economics reports that wages inched up slightly in Britain in 1985, the first time salaries have been on the upturn since the late '70s. Managers and development personnel, who had lagged behind the rest of the industry for the past few years, seem to have done the best. In West Germany, some companies are complaining that they'll have to offer dp specialists 20% more than the going rate if the job situation there doesn't improve.

If these twitches in the indicators turn into a trend, then it won't take long to spread across the Continent. For Europe's dp professionals, another party may be coming. ◉

Contributing to this article were James Etheridge, Peter Hidas, John Lamb, and Paul Tate.



CARTOON BY MIKE TWOHY

DEC

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1985

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BEATING THE PLANNING CAPACITY BOTTLENECK

ALSO

SYSTEM/36: OVERSOLD, UNDERPOWERED

TOO MUCH DASD AIN'T ENOUGH

DATAMATION

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- 3 **BRAND X OR BRAND Y?**

COVER ILLUSTRATION BY DANIEL ADEL

DATAMATION's 1985 survey of microcomputer product preferences

BRAND X OR BRAND Y?

by Edith Holmes

Xerox. Kleenex. Tide. Mercedes-Benz. Brand names all, and among the nation's, if not the world's, most recognizable: an objective that every company hopes to achieve for itself and its products. Companies that sell microcomputer products are no exception.

Each year, DATAMATION assesses the brand preferences that exist within the oem and end-user markets for microcomputers and their peripherals and software. We survey a sample of our end-user and oem readers to give companies a comparative picture of the brand awareness and market acceptance of their products. Reader responses also provide DATAMATION and the industry with a good indication of the directions various microcomputer markets are taking.

As in the past, the 1985 microcomputer brand preferences study does not try to explain a particular company's brand preference score. Instead, readers are invited to draw their own conclusions from the data, evaluating each firm's standing in light of such factors as its acquisitions and mergers, marketing or advertising campaigns, image, technological advances, changes in competitive marketing practices, and overall customer base.

This year's brand preference study involved 5,000 DATAMATION readers, 1,500 of whom worked for oems or vars. Conducted between the end of February and the beginning of April, the survey consisted of a four-page cover letter and questionnaire. Participants were asked to list the three companies they would consider in planning purchases of everything from memory boards to micro-based local area networks, and to list the one company they would prefer if actually buying the product. A prepaid return envelope and a quarter were incentives to reply. In all, some 274 oems and vars, or 18% of those surveyed, responded.

Each company in the study and in this article (see Figs. 1-7) is listed in order according to total awareness mentions (first column) and total preference mentions (second column). Results are given as a percentage of the total number of survey respondents who indicated either awareness of or a preference in a specific product category.

Where there is a tie among awareness mentions, the company with more preference mentions is listed first. Where firms tie in both areas, the listing is alphabetical. In each product category, percentages are given of the participants whose companies use the product today or plan to purchase it in the next 12 months.

The study reports preferences for the oem and end-user markets separately to facilitate comparisons between the two. In every product category, oems and vars deal with a smaller universe of companies than do end users. For example, end users indicated an awareness of some 60 companies supplying 8-bit microcomputers, and 40 of these received preference mentions. Oems and vars listed a total of 41 companies in the awareness column and named 32 of them when indicating preferences.

Beginning with micros themselves, the survey shows a clear preference for Apple Computer Corp.'s 8-bit machines by oem and end-user markets alike. Ranking second with oems and vars with half the mentions is IBM Corp.; number two for end users by a similar margin is Tandy Corp.'s Radio Shack Division, headquartered in Fort Worth. Radio Shack comes in fifth with oems and vars, while IBM is in third place with end users. At the time of the survey, 46.7% of the 435 end users who indicated awareness of and preferences for 8-bit micro vendors and 44.5% of the 157 oems and vars were using these computers. Only 11.9% of the end users and 13.5% of the oems and vars planned to purchase them in the future.

By contrast, 76.6% of 660 end users and 74.8% of 239 oems and vars today employ 16-bit micros, and 51.1% of the end users and 48.5% of the oems and vars expect to buy these machines by early 1986. Hardly surprising is the fact that IBM is far and away the lead vendor in terms of awareness and preference for both markets.

Apple and Compaq Computer Corp. of Houston jockey for second place in the awareness race in both markets, with Apple slightly ahead of Compaq where oems and vars are concerned. Digital Equipment Corp. ranks fourth in awareness in each market, but second in preference among end users and third among oems and vars.

DEC LEADS 32-BIT FIELD

DEC pulls out in front, however, when it comes to the 32-bit supermicros (see Fig. 1). In this category, the company's products are the computers of choice among oems and vars as well as end users. Apple holds second place in awareness for both markets, but ranks just behind IBM in oem and var preference mentions. IBM is listed in third place for awareness in both markets. Relatively small percentages of the 270 end users and 127 oems and vars answering the supermicro preference questions use the machine today (16.9% and 19.0%, respectively), or plan to use them in the future (12.3% and 17.5%).

The percentages are even smaller for briefcase or lap-sized computers—12.8% of 300 end users and 12.4% of 110 oems and vars currently employ these machines; only 8.5% of the end users and 7.7% of the oems and vars expect to buy them anytime soon. Here, Data General takes the lead in awareness and preference among vars and oems. Hewlett-Packard is second, and Radio Shack third. Radio Shack comes out on top in awareness for end users addressing this category, however, but runs behind Data General and Hewlett-Packard in brand preference. Grid Systems Corp. of Mountain View, Calif., is a distant fourth for end users, and fifth—behind Epson America Inc. in Torrance, Calif.—for oems and vars.

Compaq is the preferred vendor for oems, vars, and end users in the last micro-

Brand preferences provide a good indication of the directions many microcomputer markets are taking.

computer category, the transportables. In both markets, IBM and Kaypro Corp. of Delmar, Calif., hold second and third place, respectively. Again, Radio Shack ranks considerably higher with end users (in fourth place) than with oems and vars (in eighth place).

Of the 387 end users and 137 oems and vars responding to the question about transportables, 32.1% of the end users and 27.4% of the oems and vars use these micros now; 15.1% of the end users and 13.5% of the oems and vars expect to purchase them in the months ahead.

Predictably, far more oems and vars use microprocessors or plan to buy them than do end users; 29.2% of the 104 oems and vars responding in this instance employ microprocessors today, compared with 9.8% of 143 end users.

Similarly, 14.6% of the vars and oems will purchase them in the future, against 4.2% of the end users. In both markets, the top two suppliers in this category are Intel Corp. and Motorola (see Fig. 2). While National Semiconductor Corp., Santa Clara, ranks third with oems and vars, IBM comes in third with end users.

In the area of data communications, oems and vars and end users all use and expect to buy many more modems than local area networks, perhaps reflecting the continued immaturity of the latter market. No less than 60.6% of the 546 end users and 57.3% of the 204 oems and vars answering questions about modems currently incorporate them in their micro-based systems, and 28.2% and 25.5%, respectively, will purchase these devices early next year. By contrast, only 15.1% of the 212 end users and 18.2% of the 91 oems and vars addressing LANs on the survey use this hardware today, and just 12.4% and 14.2%, respectively, expect to buy this gear in the near term.

Again predictably, Hayes Microcomputer Products Inc. of Norcross, Ga., and Racal-Vadic of Milpitas, Calif., come in as numbers one and two in modems for both markets. DEC leads the way in awareness of and preference for LAN hardware among oems and vars, followed by IBM, and 3Com Corp. of Mountain View, Calif. (see Fig. 3).

Interestingly, Ungermann-Bass Inc. of Santa Clara, Corvus Systems Inc. of San Jose, Sytek Inc. of Mountain View, and Xerox Corp. virtually tie for fourth place in this market. The corresponding lineup in the end-user market is IBM, 3Com, and DEC. AT&T Information Systems scores relatively low in both markets.

The DATAMATION survey also covers end-user and oem/var preferences for several add-on/add-in devices, such as expansion and memory boards and protocol/terminal emulators, and peripherals, including monitors, printers, plotters, and tape, floppy, and hard disk drives. Highlighted here are two of the most popular product categories, hard disk drives (see Fig. 4) and matrix printers (see Fig. 5).

IBM gets top billing from oems and vars in the hard disk drive category, followed by a near tie between Control Data and Tallgrass Technologies Corp. of Overland Park, Kans. End users gave high awareness and preference marks to IBM,

FIG. 1

OEM MARKET PREFERENCES:

32-BIT MICROCOMPUTERS (SUPERMICROS)

(Percentage Based on 127 Responses)

MANUFACTURER	OVERALL RECOGNITION NO. OF MENTIONS	OVERALL RECOGNITION % OF MENTIONS	BRAND PREFERENCE NO. OF MENTIONS	BRAND PREFERENCE % OF MENTIONS
Digital Equipment Corp.	46	36.2	35	27.6
Apple Computer Corp.	19	15.0	11	8.7
IBM	17	13.4	12	9.4
Motorola Inc.	16	12.6	12	9.4
Hewlett-Packard Co.	12	9.4	8	6.3
AT&T Information Systems	11	8.7	9	7.1
Data General Corp.	10	7.9	3	2.4
NCR Corp.	6	4.7	6	4.7
Apollo Computer Inc.	6	4.7	3	2.4
Sun Microsystems Inc.	6	4.7	3	2.4
Intel Corp.	4	3.1	3	2.4
Prime Computer Inc.	4	3.1	3	2.4
Convergent Technologies Inc.	4	3.1	2	1.6
Plexus Computers Inc.	4	3.1	2	1.6
National Semiconductor	4	3.1	1	.08

All other companies mentioned received less than four mentions each.

FIG. 2

OEM MARKET PREFERENCES:

MICROPROCESSORS

(Percentage Based on 104 Responses)

MANUFACTURER	OVERALL RECOGNITION NO. OF MENTIONS	OVERALL RECOGNITION % OF MENTIONS	BRAND PREFERENCE NO. OF MENTIONS	BRAND PREFERENCE % OF MENTIONS
Intel Corp.	82	78.8	41	39.4
Motorola Inc.	74	71.2	42	40.4
National Semiconductor	18	17.3	3	2.9
Zilog Inc.	15	14.4	1	1.0
Advanced Micro Devices	9	8.7	3	2.9
IBM	7	6.7	5	4.8
Digital Equipment Corp.	5	4.8	4	3.8
Texas Instruments Inc.	3	2.9	0	0
NCR Corp.	2	1.9	1	1.0
National Unlimited Business Systems Inc.	2	1.9	1	1.0
NEC Information Systems	2	1.9	0	0

All other companies mentioned received less than two mentions each.

Tallgrass, and DEC. Of the 309 end users answering survey questions about hard disk drives, 29.6% said they use these devices and 14.4% plan to buy them. Correspondingly, 34.7% of 132 vars and oems currently employ hard disk drives in their systems, and 14.2% expect to purchase them next year.

EPSON PRINTERS LEAD LIST

Matrix printers made by Epson America lead the awareness and preference lists for end users and oems and vars, alike. Okidata Corp. in Mt. Laurel, N.J., holds a strong second place in both markets. Though IBM is slightly ahead in awareness of NEC Information Systems of Boxborough, Mass., Hewlett-Packard, and C. Itoh Electronics Inc. of Los Angeles, NEC and DEC rate higher in terms of brand preference among oems and vars. Barely trailing IBM in this regard are Centronics Data Computer Corp. in Hudson, N.H., Hewlett-Packard, C. Itoh, and Texas Instruments Inc. The survey shows that matrix printers are a part of many micro-based systems. Of the 595 end users responding to questions about this product category, 69.3% use matrix printers today, and 29.9% will buy them within the year. Similarly, 59.1% of the 197 oems and vars answering these points employ such printers, and 25.5% say they will do so in the future.

The survey covered software as well as hardware, including database management systems, operating systems, spreadsheet packages, word processing programs, language processors, and electronic mail. In both the oem and end-user markets, Culver City, Calif.-based Ashton-Tate's products lead the brand preference parade for database management systems; Microsoft Corp. of Bellevue, Wash., holds a narrow lead over IBM in operating systems; Lotus Development Corp. in Cambridge, Mass., is tops in spreadsheet packages and multifunction integrated software; and MicroPro International Corp. of San Rafael, Calif., continues to hang on to first place in word processing programs.

Interestingly, Microstuf Inc., based in Roswell, Ga., is number one in awareness and preference for communications software among end users, and first in awareness and second in preference among oems and vars (see Fig. 6). Second on both market lists is Hayes Microcomputer Products, which is at the top of the brand preference list for oems and vars. IBM comes in third for end users and oems and vars in both categories.

Of the 113 oems and vars answering the communications software questions, 33.9% use these programs today, and 10.6% expect to do so in the future. For the 317 end users answering this portion of the survey, 34.8% employ these programs, and 14.6% plan to buy them by next year.

Even fewer end users, oems, and vars use or plan to purchase micro-to-mainframe software, according to the survey. Of the 201 end users who responded to questions in this product category, only 18.1% use this software today, and just 10.6% expect to buy it. The corresponding numbers for the 54 participating oems and vars are 11.3% and 7.7%. Further, only

FIG. 3

OEM MARKET PREFERENCES:

LOCAL AREA NETWORK (HARDWARE)

(Percentage Based on 91 Responses)

MANUFACTURER	OVERALL RECOGNITION NO. OF MENTIONS	OVERALL RECOGNITION % OF MENTIONS	BRAND PREFERENCE NO. OF MENTIONS	BRAND PREFERENCE % OF MENTIONS
Digital Equipment Corp.	21	23.1	15	16.5
IBM	21	23.1	13	14.3
3Com Corp.	18	19.8	9	9.9
Ungermann-Bass Inc.	10	11.0	6	6.6
Corvus Systems Inc.	10	11.0	4	4.4
Sytek Inc.	10	11.0	4	4.4
Xerox Corp.	10	11.0	4	4.4
Wang Laboratories Inc.	5	5.5	4	4.4
Intel Corp.	4	4.4	3	3.3
Apple Computer Corp.	4	4.4	3	3.3
Novell Inc.	4	4.4	3	3.3
Sperry Corp.	3	3.3	3	3.3
Hewlett-Packard Co.	3	3.3	2	2.2
Datapoint Corp.	3	3.3	2	2.2
Orchid Technology Inc.	3	3.3	1	1.1
AT&T Information Systems	3	3.3	1	1.1
NCR Corp.	2	2.2	2	2.2
Nestar Systems Inc.	2	2.2	1	1.1
AST Research Inc.	2	2.2	1	1.1

All other companies mentioned received less than two mentions each.

FIG. 4

OEM MARKET PREFERENCES:

HARD DISK DRIVES

(Percentage Based on 132 Responses)

MANUFACTURER	OVERALL RECOGNITION NO. OF MENTIONS	OVERALL RECOGNITION % OF MENTIONS	BRAND PREFERENCE NO. OF MENTIONS	BRAND PREFERENCE % OF MENTIONS
IBM	36	27.3	28	21.2
Control Data Corp.	22	16.7	15	11.4
Tallgrass Technologies Corp.	22	16.7	13	9.8
Shugart Corp.	12	9.1	6	4.5
Tandon Corp.	11	8.3	5	3.8
Seagate Technology	11	8.3	2	1.5
Digital Equipment Corp.	10	7.6	5	3.8
Iomega Corp.	7	5.3	7	5.3
Corvus Systems Inc.	6	4.5	2	1.5
Hewlett-Packard Co.	5	3.8	5	3.8
Micropolis Corp.	5	3.8	4	3.0
Fujitsu America Inc.	5	3.8	4	3.0
Mountain Computer Inc.	5	3.8	4	3.0
Qubie Distributing	4	3.0	4	3.0
Alloy Computer Products Inc.	4	3.0	4	3.0
Sperry Corp.	4	3.0	2	1.5
Tecmar Inc.	4	3.0	0	0
Maxtor Corp.	3	2.3	1	0.8

All other companies mentioned received less than three mentions each.

And Now, the Poster!

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FIG. 5

OEM MARKET PREFERENCES:
MATRIX PRINTERS
(Percentage Based on 197 Responses)

MANUFACTURER	OVERALL RECOGNITION NO. OF MENTIONS	OVERALL RECOGNITION % OF MENTIONS	BRAND PREFERENCE NO. OF MENTIONS	BRAND PREFERENCE % OF MENTIONS
Epson America Inc.	120	60.9	72	36.5
Okidata Corp.	59	29.9	34	17.3
IBM	19	9.6	8	4.1
NEC Information Systems	18	9.1	12	6.1
Hewlett-Packard Co.	18	9.1	6	3.0
C. Itoh Electronics Inc.	17	8.6	6	3.0
Digital Equipment Corp.	16	8.1	10	5.1
Centronics Data Computer Corp.	15	7.6	7	3.6
Star Micronics Inc.	14	7.1	5	2.5
Texas Instruments Inc.	11	5.6	6	3.0
Apple Computer Corp.	7	3.6	3	1.5
Printronix Inc.	6	3.0	5	2.5
Genicom Corp.	6	3.0	4	2.0
Mannesmann Tally	6	3.0	2	1.0
Dataproducts Corp.	6	3.0	2	1.0
Toshiba America Inc.	5	2.5	0	0
Panasonic Consumer Products	4	2.0	2	1.0
Anadex Inc.	4	2.0	2	1.0
Integral Data Systems Inc.	3	1.5	1	0.5
Diablo Systems Inc. Div., Xerox Corp.	3	1.5	1	0.5

All other companies mentioned received less than three mentions each.

FIG. 6

OEM MARKET PREFERENCES:
COMMUNICATIONS SOFTWARE
(Percentage Based on 113 Responses)

MANUFACTURER	OVERALL RECOGNITION NO. OF MENTIONS	OVERALL RECOGNITION % OF MENTIONS	BRAND PREFERENCE NO. OF MENTIONS	BRAND PREFERENCE % OF MENTIONS
Microstuf Inc.	31	27.4	21	18.6
Hayes Microcomputer Products Inc.	27	23.9	23	20.4
IBM	20	17.7	13	11.5
Headlands Press Inc.	10	8.8	7	6.2
Digital Equipment Corp.	6	5.3	5	4.4
Hewlett-Packard Co.	4	3.5	4	3.5
AST Research Inc.	4	3.5	4	3.5
Mycroft Labs Inc.	4	3.5	3	2.7

All other companies mentioned received less than four mentions each.

five companies received enough awareness and preference mentions from the oems and vars to make the survey. They are, in order of appearance, IBM, DEC, Digital Communications Associates Inc. of Norcross, Ga., AST Research Inc. in Irvine, Calif., and Cullinet Software Inc. of Westwood, Mass. The list of micro-to-mainframe linkage software also includes the Kermit program, which is in the public domain. ◉

The complete study is available for $100 from the Market Research Department, Technical Publishing Co., 875 Third Ave., New York, NY 10022. ◉

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